

10/700,080

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A method for electric utility storm outage management, the method comprising:

~~determining~~ providing an interconnection model ~~of for~~ an electric utility power circuit, ~~the power circuit comprising that comprises~~ power circuit components, the interconnection model including information about the layout of the power circuit and the interconnectivity of the power circuit components;

~~determining~~ providing a store of weather susceptibility information indicative of weather susceptibility of for the power circuit components for different weather conditions, wherein the weather susceptibility information for the power circuit components is different for different weather conditions;

~~determining~~ receiving a weather prediction; and

~~determining~~ a predicted maintenance parameter for the power circuit based on the interconnection model, the weather susceptibility information, and the weather prediction.

Claim 2 (Currently Amended): The method as recited in claim 1, further comprising ~~determining an observation~~ receiving information about the actual condition of the power circuit, and wherein determining the predicted maintenance parameter comprises determining the predicted maintenance parameter based on the interconnection model, the weather susceptibility information, the weather prediction, and the information about the actual condition of the power circuit observation.

10/700,080

Claim 3 (Currently Amended): The method as recited in claim 2, wherein the observation information about the actual condition comprises at least one of a power consumer observation report, a data acquisition system report, and a maintenance crew report.

Claim 4 (Currently Amended): The method as recited in claim 1, wherein determining the weather susceptibility information comprises determining at least one of power line component age, power line pole age, power line component ice susceptibility, and power line component wind susceptibility.

Claim 5 (Original): The method as recited in claim 1, wherein the weather prediction comprises at least one of predicted wind speed, a predicted storm duration, a predicted snowfall amount, a predicted icing amount, and a predicted rainfall amount.

Claim 6 (Original): The method as recited in claim 1, wherein the predicted maintenance parameter comprises a predicted maintenance crew requirement.

Claim 7 (Original): The method as recited in claim 6, wherein determining the predicted maintenance crew requirement comprises determining a predicted maintenance crew person-day requirement based on a predicted damage type.

Claim 8 (Original): The method as recited in claim 1, wherein the predicted maintenance parameter comprises a prediction of a location of power consumers affected by the predicted power circuit damage.

Claim 9 (Original): The method as recited in claim 1, wherein the predicted maintenance parameter comprises a prediction of a time to repair the predicted power circuit damage.

10/700,080

Claim 10 (Original): The method as recited in claim 1, wherein the predicted maintenance parameter comprises a prediction of a cost to repair the power circuit damage.

Claim 11 (Original): The method as recited in claim 1, wherein determining the predicted maintenance parameter comprises determining a predicted amount of damage to the power circuit.

Claim 12 (Original): The method as recited in claim 11, wherein the predicted amount of damage comprises at least one of a predicted number of broken power poles, a predicted number of downed power lines, and a predicted number of damaged power transformers.

Claim 13 (Currently Amended): The method as recited in claim 1, further comprising ~~maintaining a computing system that predicts the maintenance parameter based on the interconnection model, the weather susceptibility information, and the weather prediction and updating the computing system based on historical information~~ determining an actual maintenance parameter corresponding to the predicted maintenance parameter; and
using the predicted maintenance parameter and the actual maintenance parameter to modify parameters that were used to determine the predicted maintenance parameter.

Claim 14 (Currently Amended): A system for electric utility storm outage management, the system comprising:
~~a computing engine that is configured to perform:~~
determining a model data store containing an interconnection model of for an electric utility power circuit, the power circuit comprising that comprises power circuit

10/700,080

components, the interconnection model including information about the layout of the power circuit and the interconnectivity of the power circuit components;

determining an information data store containing weather susceptibility information indicative of weather susceptibility of for the power circuit components for different weather conditions, wherein the weather susceptibility information for the power circuit components is different for different weather conditions;

a computing engine operable to receive determining a weather prediction; and to access the model data store and the information data store, said computing engine being configured to determine determining a predicted maintenance parameter for the power circuit based on the interconnection model, the weather susceptibility information, and the weather prediction.

Claim 15 (Currently Amended): The system as recited in claim 14, wherein the computing engine comprises:

a damage prediction engine that is capable of performing:

determining a receiving the weather prediction; and
determining a per-unit damage prediction; and

a storm outage engine that is capable of performing:

determining an accessing the interconnection model of an electric utility the power circuit, the power circuit comprising power circuit components;

determining accessing the information indicative of weather susceptibility of the power circuit components; and

determining a total damage prediction based on the interconnection model, the weather susceptibility information, and the per-unit damage prediction.

Claim 16 (Currently Amended): The system as recited in claim 15, wherein the computing engine further comprises: a maintenance crew prediction engine that is

10/700,080

capable of ~~performing~~ determining a predicted maintenance crew requirement for each type of damage predicted; and

wherein the storm outage engine is further capable of performing:
determining a predicted total time to repair the damage based on the total damage prediction and the predicted maintenance crew requirement for each type of damage.

Claim 17 (Currently Amended): The system as recited in claim 14, wherein the computing engine is further capable of ~~performing determining an observation~~ receiving information about the actual condition of the power circuit, and wherein determining the predicted maintenance parameter comprises determining the predicted maintenance parameter based on the interconnection model, the weather susceptibility information, the weather prediction, and the information about the actual condition of the power circuit ~~observation~~.

Claim 18 (Currently Amended): The system as recited in claim 14, wherein ~~determining the weather susceptibility information comprises determining at least one~~ of power line component age, power line pole age, power line component ice susceptibility, and power line component wind susceptibility.

Claim 19 (Original): The system as recited in claim 14, wherein the weather prediction comprises at least one of predicted wind speed, a predicted storm duration, a predicted snowfall amount, a predicted icing amount, and a predicted rainfall amount.

Claim 20 (Original): The system as recited in claim 14, wherein the predicted maintenance parameter comprises a prediction of a location of power consumers affected by the predicted power circuit damage.

10/700,080

Claim 21 (Original): The system as recited in claim 14, wherein the predicted maintenance parameter comprises a prediction of a time to repair the predicted power circuit damage.

Claim 22 (Original): The system as recited in claim 14, wherein the predicted maintenance parameter comprises a prediction of a cost to repair the power circuit damage.

Claim 23 (Original): The system as recited in claim 14, wherein determining the predicted maintenance parameter comprises determining a predicted amount of damage to the power circuit.

Claim 24 (Original): The system as recited in claim 23, wherein the predicted amount of damage comprises at least one of a predicted number of broken power poles, a predicted number of downed power lines, and a predicted number of damaged power transformers.

Claims 25-48 (Canceled).

Claim 49 (New): The method of claim 1, wherein the weather susceptibility information includes failure probabilities for the power circuit components.

Claim 50 (New): The system of claim 14, wherein the weather susceptibility information includes failure probabilities for the power circuit components.